

**TAKING STOCK: Community perception of a mangrove restoration and alternative  
livelihood program in the Verde Island Passage, Philippines**

by

Shannon Switzer

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Dr. Xavier Basurto, Advisor

Dr. Lisa Campbell, Advisor

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***TAKING STOCK: Community perception of a mangrove restoration and alternative livelihood program in the Verde Island Passage, Philippines***

**ABSTRACT**

Community-based management has a long history in the Philippines, especially when it comes to marine resources. The Verde Island Passage (VIP), located in the northern Philippines and dubbed the “center of the center” of the world’s marine biodiversity, is no exception. This case study looked at community perception of a mangrove protected area located in the VIP, in the small *barangay* (village) of Silonay, within the province of Oriental Mindoro. Using the Community Voice Method (CVM), this project sought to reveal the community’s perception of the current state of Conservation International’s mangrove restoration and alternative livelihood program established several years earlier. This study represents the first time CVM has been implemented specifically as a program evaluation tool.

**ACKNOWLEDGEMENTS**

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## **INTRODUCTION**

### **Protection of the Verde Island Passage**

The Verde Island Passage (VIP), located in the northern Philippines between the island of Luzon to its north and the island of Mindoro to its south (Boquiren et al. 2010), has been dubbed the “center of the center” of the world’s marine biodiversity (DENR, 2009). The VIP’s location at the heart of the Coral Triangle is by some reports home to the highest concentration of marine life in the world, including a high diversity of shorefish species, coral, and charismatic megafauna, including dugong, whale sharks and manta rays (Boquiren et al. 2010). Studies have determined that this abundance equates to 1,736 overlapping marine species across a 10-kilometer area, the density of which has been documented nowhere else in the world to date (DENR, 2009).

However, as with many marine habitats, the VIP is facing numerous threats that are negatively impacting this biodiversity and causing hardship for the seven million people living in the VIP and who depend on marine resources for their livelihood (Boquiren et al. 2010). These threats include pollution, overfishing, harmful and illegal fishing practices, unsustainable land use practices and coastal development, vulnerability to natural disasters such as earthquakes and tsunamis, as well as climate change impacts such as sea level rise, warmer sea surface temperature, increased storm frequency and intensity, increased rainfall and ocean acidification (Boquiren et al. 2010).

To address these issues that threaten biodiversity in the VIP, President Gloria Macapagal-Arroyo issued Executive Order No. 578 in 2008 to establish a national policy to protect biodiversity (DENR, 2009). The policy was to be adopted throughout the country and specifically in the Sulu Sawesi Marine Ecosystem, of which the VIP is a part (DENR, 2009). This call to action, which helped establish a set of national goals for a VIP-specific management plan to be accomplished by the year 2018 (DENR, 2009), has led to action at the provincial level as well. In January 2014, Representative Reynaldo Umali of the Oriental Mindoro Province, one of five provinces that lie within the VIP, filed House Bill 3086 mandating the environment, tourism, and other



government departments as well as local government units create a marine protected area (MPA) and ecotourism zone master plan (Carcamo, 2014).

### **Co-Management in the Philippines**

These executive orders and bills to protect biodiversity suggest that the national and provincial governments are taking marine conservation seriously. While it is necessary for these high-level government agencies to take action on conservation measures (Campbell et al. 2009), it is also crucial that the local community governance units, known as *barangays*, maintain substantial power in the form of co-management. This is exemplified by the case study of Apo Island, which was touted as a shining beacon of community-based management in the early 90's, but subsequently crumbled and was taken over by top-down management with the implementation of the National Integrated Protected Area Systems act of 1992 (Hind et al. 2010). The top down model also largely failed due to resentment and lack of support from the barangays, and studies have since shown that the local communities preferred a co-managed system that has both bottom-up and top-down components (Oracion et al., 2005) as outlined by the MPA governance theory (Hind et al. 2010; Jones, 2001).

Gruby and Basurto (2013) further the concept of co-managed resources through their studies of polycentric management of large marine commons in Palau and the importance of allowing stakeholders at all levels to participate in marine area planning in order to promote diverse thought and institutional innovation that can lead to improved resource management (Gruby and Basurto, 2013). Yet another term used to describe this concept of equitable participation across different levels of governance is that of devolution, in which fishing communities “become the partners rather than the “targets” of government agencies” (Pauly, 1997 at page 7). However, while such devolution is important for successful community-based management, it is also critical to remember that a community is not necessarily homogenous, and there may be competing views within it (Argawal & Gibson, 1999). Acknowledging these patterns within a community can be a critical component to empowering local stakeholders to manage their natural resources sustainably (Argawal & Gibson, 1999).

## **Conservation International and the International Climate Initiative**

In order to facilitate a co-managed structure, the environmental nonprofit, Conservation International in partnership with the city and provincial governments, has implemented a new set of programs that are designed to include local leadership and engagement. Based on a series of vulnerability assessments conducted in 2009 by Conservation International (CI) and supported by grants from the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety Department of Germany through their International Climate Initiative (IKI), CI initiated a new suite of projects which focused on “mangrove reforestation, training communities and government in ecosystem based adaptation coastal management techniques, and income diversification strategies” (Nunez, 2013). These projects were established in parts of Brazil, South Africa and the Philippines (Nunez, 2013). In the Philippines, CI targeted the VIP, and within that area, two field sites were identified as potential pilot projects, one of which was Barangay Silonay.

### **Silonay Mangrove EcoPark & Alternative Livelihood Project**

Barangay Silonay, established in 1733, is thought to be the oldest barangay in Calapan City (Erasga, 2012). As of 2012, Silonay was home to 1,472 residents, 95% of which were literate in the national language of Tagalog (Erasga, 2012). Barangay Silonay was selected as a pilot project for several reasons. First, the historic mangrove area that had once buffered Silonay had been deforested for charcoal. Second, several of Silonay’s barangay councilors expressed interest in working with CI as one of their pilot IKI projects. After identifying Silonay as a possible candidate, CI conducted a socio-economic baseline survey in 2009, in conjunction with community consultations, through the Sulu Sulawesi Seascape Project funded by the Walton Family Foundation (Encomienda, 2015). ). CI’s socioeconomic survey looked at three categories of variables: socioeconomic, governance, and social vulnerability. This study helped confirm Silonay as one of the pilot sites for the IKI-funded project, which launched in 2011 (Encomienda, 2015). One result from this survey, and the final reason Silonay was selected, showed that 75% of the population reported having a marine based livelihood, and of those, two-thirds reported that their catch was declining compared to the three prior years (Erasga, 2012).

Additionally, CI's survey also found that 65.7% of respondents reported they did not earn enough to cover their family's expenses (Erasga, 2012). Based on these results and others generated from a series of focus group discussions, key informant interviews, and group interviews, CI concluded that Silonay's fishing grounds were depleted and that both fishing and non-marine economic opportunities must be available in tandem in order to alleviate poverty and that these efforts must be decentralized and generated at the grassroots level (Erasga, 2012). This strategy of providing alternative income opportunities to fishers aligns with other literature on the topic (see Pauly, 1997). CI also decided to address the fisheries depletion by undertaking a mangrove restoration effort in order to replenish the fishing grounds, because mangroves have been shown to act as nurseries for the juvenile of many marine species.

Accordingly, CI began working with a community led group called Sama-Samang Nagkakaisang Pamyanan ng Silonay (SNPS), which translates to Collective United Community of Silonay, through a consulting agreement signed in 2013 (Encomienda, 2015). CI trained members of the organization in mangrove restoration techniques, protected area monitoring, alternative livelihood ventures, and the basics of climate change adaptation, including how mangrove restoration can increase protection from storm surges and sea level rise (Boquiren et al., 2010). CI then gave members the responsibility of spreading this knowledge and recruiting other Silonay residents to join the organization. In April of 2013 CI and SNPS established an official conservation agreement stating that members would oversee 25 hectares of mangrove reforestation with funds provided through CI. Once that was completed, another 10 hectares of an abandoned fishpond were restored under a separate contract (Bool, 2014).

As part of the agreement, officially called the "Silonay Mangrove EcoPark Project," which I will refer to as SMEP from here forward, CI provided training for alternative livelihood activities. These included paying members to plant mangrove propagules as part of the restoration effort, opening and stocking a small shop, and creating value added products. One of the main value added products introduced was a nutritious snack food made from cassava flour. The product is called *shing-a-ling* and SNPS members produce it in Silonay and sell it at the shop as well as to local schools. SNPS members were also trained in designing t-shirts and making souvenirs from mangrove products, such as empty seedpods. The intersectoral nature of these alternative

livelihood opportunities is not a new concept and was first put forth by McManus et al. (1992) (Pauly, 1997). Specifically, CI hoped these new opportunities would provide an incentive to stop felling mangrove trees for charcoal as well as relieve fishing pressure.

Ecotourism represented another component of CI's intersectoral income diversification. Interest in ecotourism as a conservation tool grew in the 1980s and 90s (see Young, 1999), but enthusiasm has waned in recent years (see Kiss, 2004). Today ecotourism is seen not as a panacea to solve all conservation conundrums but as one tool in a kit of many, each one potentially useful in a particular context. In the Philippines, ecotourism and fisheries management have become intertwined through the implementation of marine protected areas, though not always successfully (Oracion et al., 2005). Even when deemed successful biologically, these MPAs have not always served the communities in which they are implemented (Christie, 2004). In other cases MPAs have been characterized as a form of globalization that changes how communities relate to their surroundings (West et al., 2006).

In the case of SMEP, CI introduced ecotourism in two forms. First, visitors pay to plant mangrove propagules as SNPS members teach them about the importance of mangroves to the community. Second, in addition to this "teaching forest" model, the community also built a boardwalk into the restored forest area that tourists can pay to enter and explore. Third, CI trained several younger members of the community as naturalist tour guides to lead visitors on the boardwalk or by kayak.

With this background, I conducted a participatory study to evaluate the project to date. My study had three main objectives: 1) to understand Silonians' perception of SMEP; 2) to use the resulting film from the CVM process as a community-planning tool to strategize future management plans for Silonay; and 3) to understand if the Community Voice Method, or some iteration of it, can be a useful project evaluation tool for community-based projects, using Silonay as an ethnographic case study.

## **METHODS**

### **Community Voice Method**

To complete the study I implemented a relatively new method of qualitative inquiry and participatory research known as the Community Voice Method (CVM). Dr. Gabriel Cummings and Dr. Carla Norwood developed CVM between 2001 and 2004 in response to challenges they identified with the public participation process surrounding land use in Macon County, North Carolina (Cumming & Norwood, 2012). They determined the process needed to be better informed by appropriate data, needed to include a diversity of views, and needed to foster ongoing dialogue (Cumming & Norwood, 2012). Since this initial project, nearly a dozen others have been completed, including two marine-related projects—one on coastal development in Carteret County, North Carolina (see Campbell & Meletis, 2011) and one addressing sea turtle harvesting regulations in the Turks and Caicos Islands (Campbell, 2015).

CVM has three distinct phases which I followed as closely as possible when conducting the study: 1) participatory discourse analysis, 2) public deliberation, and 3) reintegration into civic discourses (Cummings & Norwood, 2012). These phases and deviations from them will be explained below.

### ***Phase I: Participatory Discourse Analysis***

#### ***Data Collection***

Over a period of three weeks between July and August of 2014, I conducted 50 semi-structured filmed interviews, each lasting between 45 and 90 minutes. I developed the interview guide to cover topics relevant to SMEP, which had been in existence for about two years at the time of the interviews, with questions covering four major themes including mangrove restoration, fisheries, ecotourism and climate change. Within each section, I also included questions related to livelihood and income. Both my advisor, Dr. Lisa Campbell, and CVM creator, Dr. Gabriel Cummings, then reviewed and revised the guide. Lastly, CI staff members from the Manila office, including Executive Director Enrique Nunez, Project Manager Josella Pangilinan, VIP Projects Coordinator Michelle Encomienda, and IKI EbA Project Assistant, Eunice Gainan, gave

final input. While these CI staff members helped shape the interview guide and facilitated interaction with the community by providing interviewers, they did not develop the initial project idea or fund the research. My study was funded by a grant from the David Brower Foundation and was administered by the Nicholas School of the Environment at Duke University. So while CI staff supported me on the ground and gave input on the interview guide, they left the overall objectives and design of the project to my discretion.

Alma Bool, a contract staff person of CI, who was born and currently resides in Silonay, served as the main interviewer and translator. She summarized the Tagalog responses in English for me throughout the interview. She also facilitated the *purposive* interviewee recruitment (Cummings & Norwood, 2012), suggesting initial interviewees who were knowledgeable about SMEP and who would be interested in speaking with us. After the initial purposive selection, we used *snowball* sampling, asking interviewees to suggest other residents who would be interested in discussing the project. Additionally, in order to reflect the diversity of viewpoints within Silonay as fully and accurately as possible, we made certain that two-thirds of the interviewees were non-SNPS members, with one-third of the interviewees being SNPS members, resulting in 35 non-SNPS members and 15 SNPS members. This also allowed us to determine if there was any noticeable difference in responses between the two groups. Further, we hoped this would avoid only involving an “elite” group within Silonay, which can limit the efficacy of the participation process (Cornwall, 2008) and lessen the diversity of stakeholders represented.

Additionally, this nonrandom snowball sampling allowed us to reach stakeholders across multiple degrees of social separation (Cummings & Norwood, 2012), and resulted in interviews with 25 women and 25 men between the ages of 12-68, with occupations ranging from fisherman, to tricycle driver, to pharmacist (see Figure 1.0). As can be seen in the figure below, interviewees with marine based livelihoods made up the largest proportion of those interviewed. This ratio reflects the large percentage of Silonay residents who base their livelihoods on marine resources (Erasga, 2012). The interviews provided an opportunity for fishermen to give input on the state of their fisheries and how to manage the fisheries more effectively, an important process for building community capacity (Silver & Campbell, 2005; Wilson and McCay, 1998).

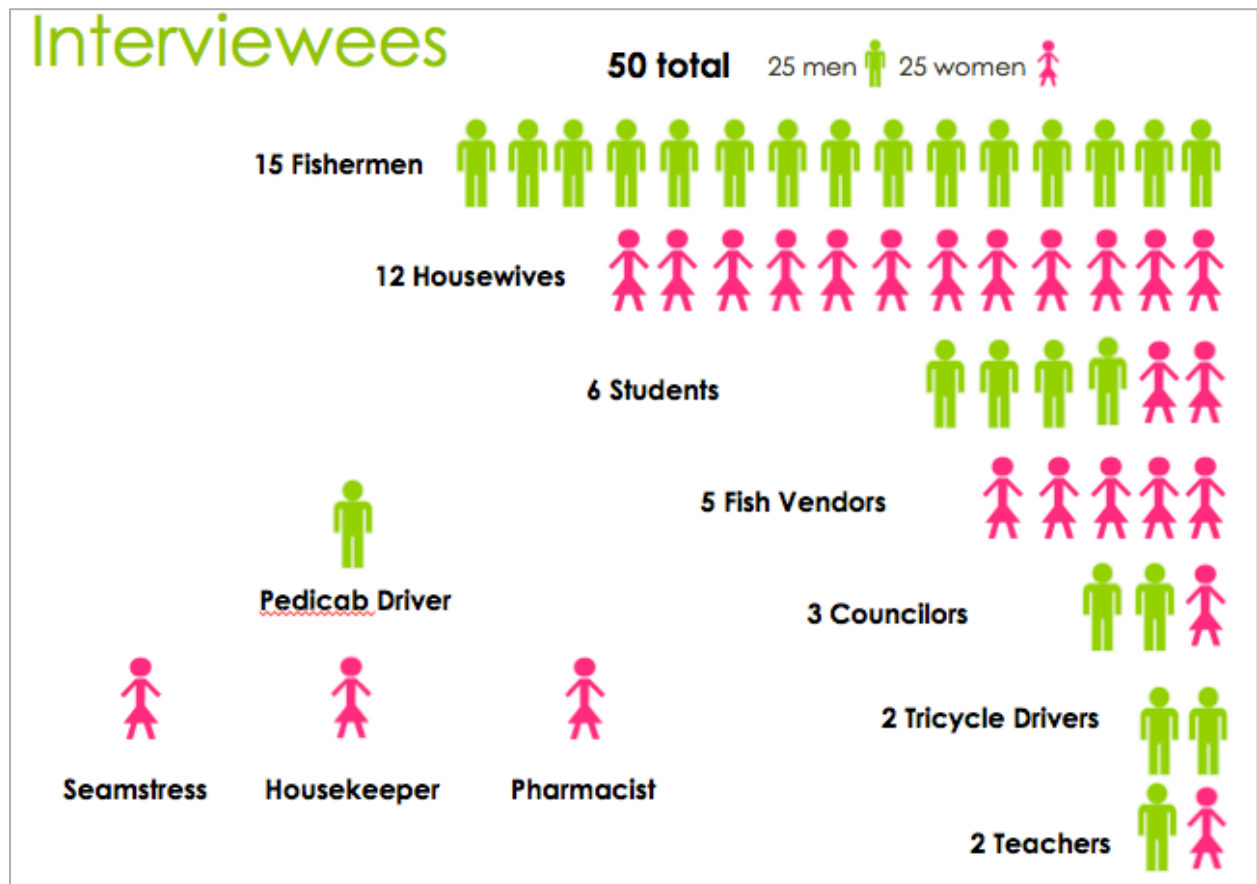


Figure 1.0. Interviewees by Profession

### Data Analysis

After the initial data collection, a student assistant from the University of the Philippines Diliman worked on a contract basis to transcribe and translate the resulting footage. CI staff member Michelle Encomienda spot-checked the translation to verify its accuracy. I then coded the resulting transcripts in the United States using NVivo, a qualitative analysis software, to categorize the statements by topic and perspective in order to assess the range and weight of the various discourses and how they were distributed (Cummings & Norwood, 2012). The data was coded to specific “nodes” or themes. The core themes identified, including *mangrove area*, *fisheries*, *ecotourism* and *climate change adaptation* reflected the structure of the interview guide. Text from the footage was often coded to multiple themes, including additional parent themes such as *challenges*, *benefits*, *suggestions*, *hopes & aspirations*, as well as “child” nodes

or themes housed within each parent theme, in order to more closely examine personal perspectives on each topic. These were created inductively as the text was coded and repeating topics were identified.

### *Documentary Production*

Next, I used this analysis to produce a film that presents the interviewed stakeholder discourses entirely in their own words. For each category of related statements, I selected excerpts of stakeholders who communicated a particular perspective on the topic in a clear and effective manner, which Cummings and Norwood (2012) have named “exemplars.” However, per the CVM precedent, I included every respondent in the film, despite the fact that they may not have fit this exemplar status. While this procedure is more inclusive, it detracted from the overall quality and fluidity of the film. Once spliced together, the respondents formed a “multivocal narrative” that communicated the shared views of the community without the use of an external narrator (Cummings & Norwood, 2012; McDowell, 1996).

### *Focus Group Feedback on Film*

In March of 2015, I returned to Silonay, along with several staff from CI, and held an informal screening followed by group discussion. The purpose of this step was to pre-test the film in order to determine the accuracy and credibility of the analysis, as well as accessibility and relevance to the stakeholders (Cummings & Norwood, 2012). This proved to be the most difficult part of the analysis due to miscommunication further complicated by the language barrier, which I will discuss in the results section.

### ***Phase II: Public Deliberation***

Next, several CI staff and I organized a public meeting to screen the updated film and then facilitate participant response in focus groups. Generally, in accordance with CVM it is important to have multiple screenings at different times of the day on several different days (Cummings & Norwood, 2012); however, due to Silonay’s small population and compact size, we decided it would be sufficient to hold one official screening. Not including children, and according to the official sign in sheet, there were 70 residents in attendance. After the screening, those who remained, divided into three focus groups, which were led by CI staff members Michelle Encomienda, Josella Pangilinan, and Eunice Gainan, who loosely followed a focus



group guide developed a priori (see Appendix 2.0). The guide touched on several threads of questions including participants' opinions of the views presented in the film and whether or not the film could be useful in other capacities. They were also asked if they thought the community was capable of continuing SMEP once CI funding has ended in May 2015.

We also administered a short follow-up survey, which was distributed directly after the film screening and focus group discussions. It included both Likert scale and open-ended questions and was used to assess whether or not the participants felt the CVM process had been useful and to solicit suggestions for improving it (see survey in Appendix 3.0).

### ***Phase III: Reintegration into Civic Discourses***

This part of the method is still ongoing, and will partly be accomplished by disseminating this report and the final film in various formats to participants, media outlets, policymakers and project partners (Cummings & Norwood, 2012). I will also make the report and film available online for other interested parties. This phase is important as it provides an opportunity for Silonay residents to realize their interests that were revealed through the CVM process, while also informing other conservation projects run by CI as well as the local and provincial governments.

## **RESULTS & DISCUSSION**

### **Interview Results**

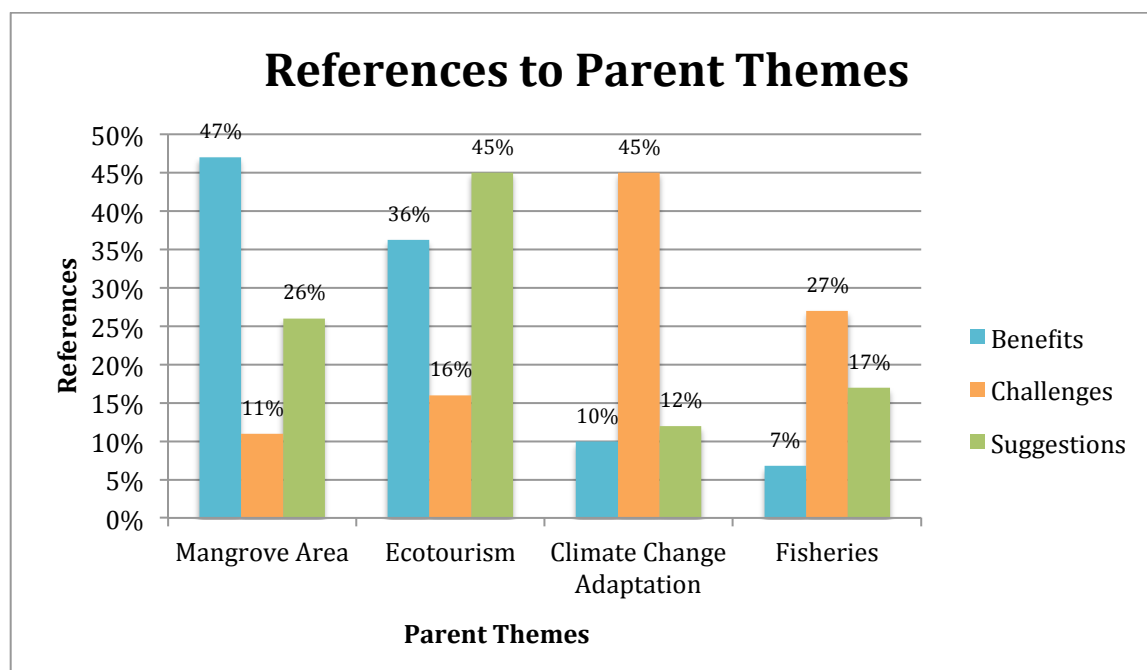
Overall, the interview analysis revealed that on the whole the interviewees perceived SMEP to be a useful project, due to the positive benefits it has brought the community. This will be discussed further, but first it is important to acknowledge that interviewees may not have felt comfortable expressing negative views of SMEP due to the fact that the interviewer was affiliated with both CI and SNPS, and this may have constrained the data collection process. However, while the interviewer's affiliation may have influenced the results, it did not stop interviewees from discussing some negative aspects of the project. For example, some interviewees stated that much of their involvement with the mangroves had been unpaid

volunteer work that should have been compensated, that SNPS is too exclusive and needs to benefit more stakeholders, and that community members need to be more active so work is not always left to the same few individuals to complete. These were all expressed during the filmed interviews, suggesting that some participants felt comfortable stating negative opinions; however, there is no way of knowing if such negative statements would have been more prolific or harsher had the interviewees not been affiliated with CI or SNPS.

### ***Parent Themes***

Overall, the coding revealed 251 references to *benefits* received from SMEP. Of these, the mangrove area core theme had the highest percentage of text coded in reference to benefits (47%) (see Figure 1.0 below). This is logical because the mangrove area was a core part of SMEP and was present in every aspect of SMEP, which meant that many benefits coded to mangrove area were also coded to one or more of the other core themes. Next most referenced was ecotourism with 36% of references coded to it. Many people discussed how ecotourism had brought extra income to the barangay as well as more notoriety. Next most referenced were comments classified as climate change adaptation, garnering 10% of the references. A quote from Jerson Ibon, a 35-year old fishermen and non-SNPS member, exemplifies references coded to this theme:

*“I noticed a big change. When typhoon Glenda passed, the mangroves served as a huge shield to protect the houses from destruction brought by strong winds.”*



**Figure 1.0.** Note: not all percentages add to 100% for each parent theme due to rounding.

Finally, fisheries only garnered 7% of references to benefits, suggesting that possible benefits to fishermen from the project are yet to be fully realized. However, several respondents mentioned a noticeable increase in the number of fish in Silonay. For example, Larry Vergara, a 54-year old tricycle (motorcycle with attached car) driver, said:

*“It’s better now. Since there have been mangroves, the number of fish have increased. Before when there were still no mangroves, nothing could be caught. The fishermen had to go to far places just to catch fish. The income of the people of Silonay has gotten better because of the mangroves.”*

While the range of responses surrounding fish stock varied from a noticeable increase to no change, not a single respondent stated that the stock had declined since the start of SMEP.

Next, we move on to the *challenges* theme, which only garnered a total of 135 references, a little more than half as many mentions as benefits received. With challenges we see that while climate change adaptation and fisheries were referenced the least in terms of benefits, they were mentioned the most when it came to challenges, with 45% and 27% of references, respectively.

Climate change adaptation challenges were most often related to health issues caused by unpredictable weather and temperatures, which is discussed below when further dissecting the challenges theme.

Ecotourism was the third most referenced (16%). Respondents often mentioned challenges related to funding of facilities for visitors, such as building a modest restaurant. They also discussed the fact that often tourists do not see the draw to visit mangroves and often do not appreciate their value. This is mentioned by 18-year-old high school student, Raymond Abrea:

*“There’s a big challenge because in a layman’s perception, visiting the mangroves is dull compared to visiting a tourist spot that is easy to travel to and explore. The biggest challenge here in Silonay with ecotourism is finding ways for the community to manage it that will make it easier for tourists to explore.”*

Finally, mangrove area had the least references with 15 mentions. Challenges related to the mangrove area node noted management difficulties as exemplified by Barangay Captain, 63 year old, Benicio Vergara:

*“I am very familiar with it because I was assigned to serve as guard there. At first, it was very difficult, because we could hardly control the illegal loggers and the like. They thought it was the only way they could make a living.”*

Last in this analysis, the community made a total of 253 *suggestions* for improving SMEP and Barangay Silonay as a whole. The majority of references were made in regards to ecotourism (45%), followed by mangrove area (27%), then fisheries (16%) and finally climate change adaptation (11%). Considering respondents shared the most ideas for improving tourism, CI and SNPS may want to consider focusing their efforts on further developing that aspect of SMEP. One particularly interesting finding was that the majority of interviewees supported a partnership between SMEP and a nearby MPA called Harka Piloto, managed by a neighboring barangay, Lazareto, in which tourists could visit both areas on a package tour. Other suggestions included building a modest two-bedroom rest house as well as a restaurant to accommodate tourists.

SNPS could establish a subset of these suggestions as their next target projects to maintain momentum on SMEP.

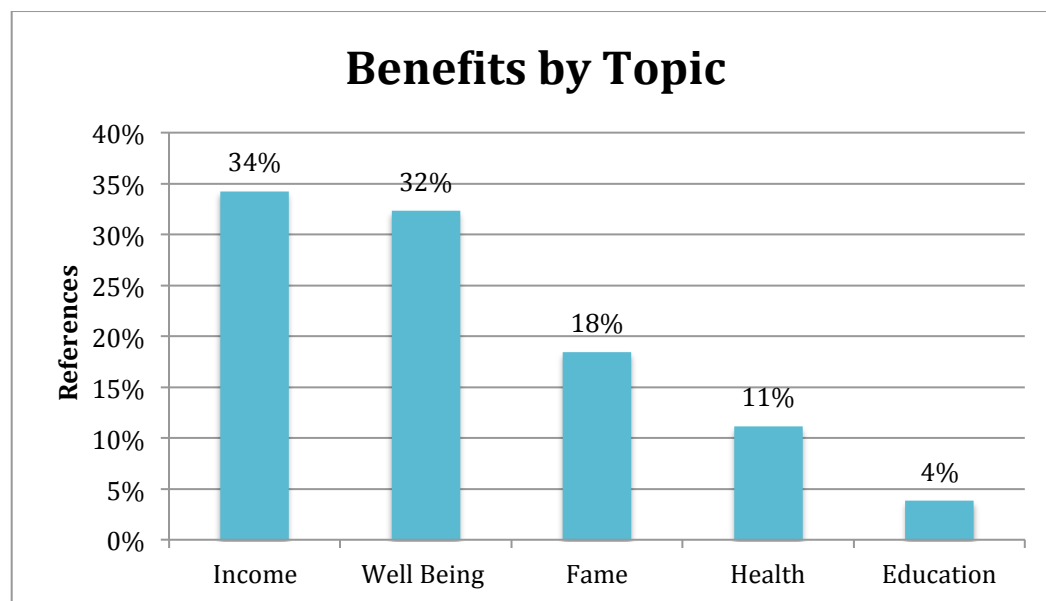
Finally, the fact that climate change adaptation had the least number of suggestions but the highest number of challenges referenced to it, suggests that either the topic itself or solutions to it remain elusive to respondents. These are both logical conclusions due to the complex nature of climate change. It is a similar case with fisheries, as the topic with the second least suggestions, and the second highest references to challenges. CI and leaders of SNPS may want to consider what steps can be taken in these two areas to work more closely with municipal and provincial governments to both better inform the community about these issues as well as discuss possible local strategies for addressing them.

### ***Benefits & Challenges***

It is also instructive to further examine the parent themes of benefits and challenges to understand what interviewees collectively felt were the most significant benefits they've received from the project as well as the most challenging obstacles they face in their daily lives and with the project specifically. According to the analysis, the most referenced benefits received from SMEP were related to income (34%) (see Figure 2.0 below). However, the amount of increased income was never specified and often people mentioned that while it has increased it has not been enough to fully replace other forms of income, like fishing. Nearly equally mentioned, with 32% of the references, was increased well being, which included things like increased protection from storms due to the reforested mangroves acting as a buffer, to the mangroves providing a place for peaceful contemplation and reflection. Fame was the next most referenced benefit, with about half as many references as well being. This included mentions of Silonay becoming known in the Philippines and across the world, as exemplified by Rennel Montero, a 33-year-old fisherman:

*“My dream for Silonay is that if it’s becoming famous now, I want it to be even more famous in other places. Not just in other places, but in the whole world. Because now I see many people coming from other countries. When I was a child, there weren’t any.”*

Every interviewee who mentioned increased renown spoke of it as a benefit, and no respondents mentioned any negative effects, such as increased traffic or waste. It would be interesting to see if the community perceived any negative effects from this increased fame ten years from now, as has been documented in other fishing communities in developing nations (see Stonich, 1998). Finally, health benefits represented 11% of the references, usually in regards to the restored mangrove canopy protecting from the sun and providing fresh, cool air.

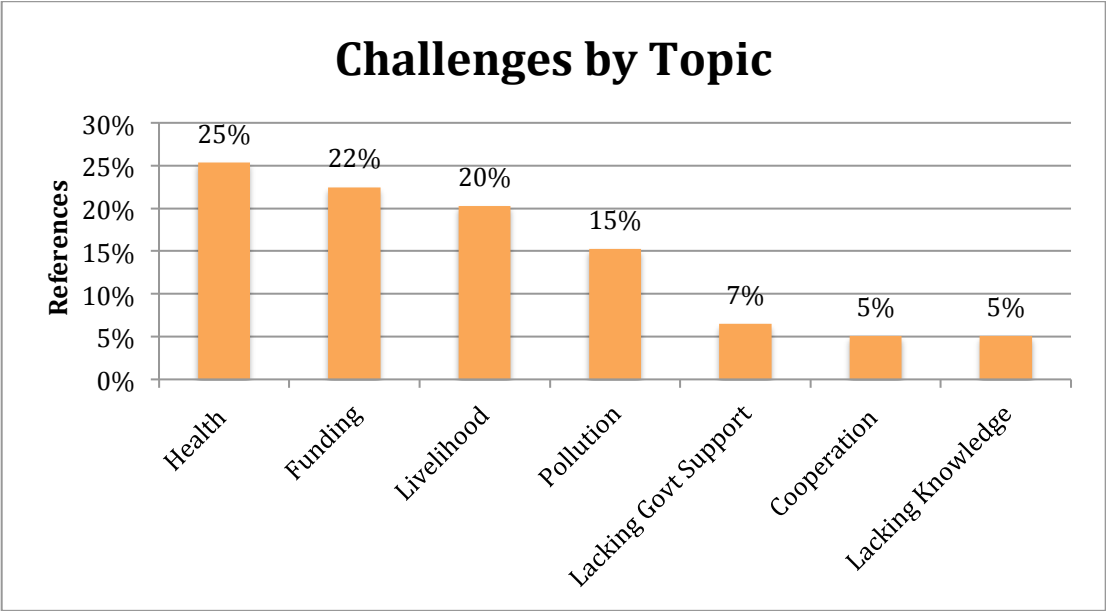


**Figure 2.0.** Note: percentages do not add to 100% due to rounding.

Overall, there were less references to challenges with a total of 138 as compared to 250 references to benefits. When it came to challenges, health was the most frequently referenced challenge (25%) (see Figure 3.0). Health issues were mentioned as preventing people from working both traditional jobs as well as the jobs created by the income diversification program. Additionally, often references to health challenges were related to climate effects, such as sudden changes in temperature from extreme heat to cold causing illness. The next most referenced was funding (22%), which was often discussed in response to a question on the interview guide asking whether the interviewee felt the community was capable of continuing the project on their own (see Interview Guide Appendix 1.0). The challenge of funding is critical, because CI plans to stop funding SMEP in May 2015. While the community wasn't aware that CI had established a date to terminate funding during the filmed interviews, CI communicated this to SNPS in the

interim between the interviews and the screenings. Even without knowing that CI funding was to end in several months, many interviewees stated that while the community had the knowledge and skill to continue SMEP, they were lacking in funds, as exemplified by the response of elementary school teacher, Gemma Abrea, age 28:

*“I don’t see any problem with the management. I can speak with the [barangay] captain if I need to. Maybe the only problem is the money that we have. We need more money to continue to maintain and improve the mangrove protected area. We have difficulty looking for money.”*



**Table 3.0.** Note: percentages do not add to 100% due to rounding.

The other notable challenge was livelihood, with 20% of the references. These were often comments on difficulties interviewees had providing for one’s family, especially paying for their children’s’ education. Air, freshwater, and ocean pollution comprised 15% of the references to challenges.

Finally, government support, cooperation, and lacking knowledge each represented a small portion of the references to challenges. In regards to cooperation, several interviewees noted that everyone in the community should be a part of SNPS, either by encouraging more people to join

or by making membership compulsory. However, others mentioned that while they wanted more people to participate in SMEP and SNPS, they wanted people to do it for the right moral reasons. These interviewees explained that they did not want residents to join simply for monetary benefits but because they desired to be good stewards of their environment and help their barangay. Such competing views present a conundrum: requiring membership would mean residents be forced to join SNPS and would certainly lead to people being involved who do not have the “right” moral motivation.

Additionally, through participant observation and discussions with several SNPS members outside of the formal interviews, residents mentioned that some families in Silonay could not afford the one-time 200-peso fee to join SNPS. Of the 35 non-SNPS members interviewed, one explained she helped with mangrove planting when she could, despite not being able to join SNPS, though she did not express it was because she was unable to afford the membership fee. Other interviewees mentioned they could only afford one meal a day, implying paying a membership fee would not be financially feasible. This is an important topic to consider, especially because CI has advised SNPS leaders to incorporate an additional monthly fee in order to sustain funds for SMEP (Pangilinan, 2015). This new fee could further alienate residents unable to afford the dues. In light of this, SNPS might want to consider setting up a scholarship fund for families unable to afford membership, especially if they decide to make membership mandatory. While these membership-related challenges were only mentioned a handful of times, it seemed to be a pressing topic for SNPS, and it is possible that participants would have addressed them more if the interviewers weren’t affiliated with CI or SNPS.

After conducting the analysis, I used the results discussed thus far to create a 40-minute research film titled “The Mangrove Keepers.” When editing the film, I attempted to represent the themes revealed by this analysis proportionately in order to accurately portray the stakeholders’ opinions and perceptions. Names and titles were not added to the film in order to give equal weight to all of the views being presented (Cumming & Norwood, 2012). Additionally, the community selected the song that accompanied the film, “Masdan Mo Ang Kapaligiran” (which roughly translates to “Watch over the Environment”) by Asin, a Filipino folk band.



## Pre-test Screening

As mentioned in the methods section, I encountered the most difficulties with this part of the project. After watching the film, community members invited by SNPS gave feedback that seemed incongruent with the purpose of the film. After seeking clarification, one of the CI staff members later explained that several attendees thought the purpose of the film was to attract tourists. I am still not entirely sure how this belief came about, as my interviewers had explicit instructions to explain the purpose of the interviews based on a set script. One thought is that due to the lapse in time between the filmed interviews and the screenings, the participants may have forgotten the purpose of my project. Additionally, my interviewer, Alma Bool, noted that in the past when visitors have spent time in the community filming, it has been related to tourism promotion. Whatever the reason, this misunderstanding made the community's feedback during the initial screening confusing and surprising, especially considering my objective to create a participatory film to evaluate SMEP and aid in future planning.

Despite this setback, the viewers had useful suggestions. The group agreed that I must include the interviewer, Alma Bool, though she was intentionally excluded from the film because of her position as interviewer and because the interview I conducted with her did not follow the same format or ask similar questions to the others. Once again, this request could suggest that the interviewer was so intertwined with the project that interviewees may have felt disinclined to be fully honest about their opinions of SMEP. However, the change was made and she was included in the final film to the satisfaction of the participants.

Another interesting result of the pre-testing was that several clips in the film were no longer relevant due to circumstances that had changed since the interviews seven months earlier. I deliberately included these parts of the film in the pre-test to see how the community would react to them. Several people responded that they served as good benchmarks highlighting progress the community had made on SMEP. Two examples include an interviewee explaining that the mangrove boardwalk had yet to be completed and failed to reach its end point at the guard tower. However, this project had been completed by the time I returned in February. Another example was several of the *bantay bakawan* (mangrove guards) noting that they needed better tools to

protect the mangrove area from illegal harvesting, especially a boat. By my return, SNPS had purchased a boat for this purpose. These clips were removed for the final screening.

### **Final Screening & Focus Group Results**

By the final screening CI staff had reiterated the purpose of the project and film, and they emphasized it again during the introduction to the film. The film was shown in the barangay's main church with around 70 people present, not including children, and local snacks and beverages were served. After the screening, the three informal focus groups of between 15 and 20 people were led by CI staff, who encouraged participants to discuss the film using questions from the focus group guide (see Appendix 2.0 for full text). Three basic questions asked by the focus group leaders (FGLs) included: 1) How do you feel about the views expressed in the film—were there any particularly interesting ones, ones you agreed with or disagreed with, or ones not mentioned that should have been?; 2) After watching the film, how did you feel about SMEP continuing, would you like it to and do you think it is possible, especially considering the funding from CI will soon end?; and 3) Do you think the results from the film or the film itself could be useful in other capacities, if so, how? Notes from the FGLs, who used these questions to generate and guide the FGDs, revealed interesting responses from the participants.

Group A was impressed by the youth's knowledge of environmental management and protection displayed in the film. They also agreed with interviewees who spoke about the importance of having savings for natural disasters and other emergencies and found it to be a good reminder. One participant, who was also the Barangay Captain of Silonay, expressed feeling uncomfortable by the respondents in the film who discussed not receiving benefits from the project or SNPS and wanted that part to be removed. The FGL responded that these dynamics are a natural part of a community organization, and it should be considered a good reminder about the need to explain to the community the design of SNPS—the more one puts into it the more one gets out of it. The FGL also emphasized that while non-members don't receive income, they do receive benefits such as protection from the mangroves, whether or not they explicitly acknowledged that in the film.

Finally, in response to whether group A participants thought the project could continue

successfully when CI's funding ends, they expressed that it could, because there are many other local organizations interested in assisting them. This is an important finding from the focus groups, because as mentioned earlier, analysis of the interviews revealed that funding was the second most mentioned challenge. However, as evidenced by the responses of the focus group participants, they seemed more confident in their ability to find local NGO's to continue to fund SMEP. The fact that the project would move from being supported by an international NGO to a local one could be a positive sign for its continuation as long as the local NGO's agree to provide funding that will help continue implement projects designed by SNPS with input from the broader community (Argawal & Gibson, 1999).

Group B expressed that they were pleased that the work they are doing now will benefit future generations. The group also expressed dismay at watching the value added product, known as shing-a-ling, being produced without the use of gloves. Other participants responded by explaining that SNPS had run out of gloves when the process was filmed. Participants also recommended removing the clip of the fisherman shown smoking, because it is a "nasty habit." These two comments show a level of self-consciousness about how Silonians are perceived by outsiders. Even though these events occurred and were filmed as part of a normal day in their barangay, they expressed only wanting the presentable parts being shown in the film. This was a reaction that I had not anticipated. Finally, they discussed possibly making climate change seminars compulsory and having them more often.

Group C was impressed with the future aspirations interviewees expressed for Silonay and agreed with them, especially the idea to construct a restaurant near the mangrove forest. They also echoed the final sentiment expressed in the closing scene of the film: they wanted to continue to be known as the barangay that cares for and appreciates their environment. They also explained that they do not want the funding and support from CI to end, because they still depend on CI for guidance and resources. This response, in regards to funding, contrasts with that expressed by group A.

In response to the final question of ways in which the film might be useful, groups A and C agreed that the film should be screened to neighboring barangays to demonstrate to their

residents that if Silonay can restore their mangroves and take care of their coastal ecosystems, other barangays are capable of doing so as well. The groups also expressed that Silonay would be glad to help other barangays set up similar programs. Group B suggested it should be shown in local schools in order to teach young children about coastal stewardship. Finally, group C also suggested it be shown to potential visitors and tourists to help them understand the importance of the mangroves to the community and all of the ecosystem services it provides them.

### Survey Results

Thirty-one people filled out the anonymous short survey developed as a way for the community to evaluate the CVM process. As seen in Table 1.0 below, nearly every respondent answered “Yes” to the three Likert scale questions, suggesting they felt the CVM process had been accurate in representing their community and was a useful exercise. However, for the question of whether or not the respondent thought the process had been productive, two respondents answered “A little” and one responded “Not Sure,” indicating that the purpose of the film may have still been unclear to some of the participants or they did understand the purpose and didn’t see significant value in it.

SURVEY RESULTS					
QUESTIONS	RESPONSES				
	No	A little	Not Sure	Somewhat	Yes
Do you think the movie represented Silonay in a balanced and accurate way?	0	0	0	1	32
Do you feel participating in this process was productive?	0	2	1	0	30
Are you at all confident this film and process will lead to further developments in Silonay?	0	0	0	1	32

**Table 1.0**

In addition to the Likert scale questions, were two open-ended questions to elicit suggestions and feedback on how to improve the CVM process. While no suggestions were made for the improvement of the process itself, several comments were made about SMEP similar to the following:

*“I hope that the lessons learned from the film will always be remembered, and that people will not ignore them, in order to further develop Silonay.”*

Several respondents also noted that the project must be continuous and Silonians should not let it deteriorate no matter what happens with current funding and support. Sentiments discussed in the focus group were also echoed in the open-ended survey responses in regards to the importance of sharing the film with neighboring barangays and that Silonay residents should be required to attend meetings and participate in mangrove restoration.

## **CONCLUSION**

The results from this study have several implications for Silonay and Conservation International, but also for coastal community planning and conservation organizations more broadly. In this case study, the Community Voice Method (CVM) revealed that the Silonay Mangrove EcoPark Program (SMEP) has, overall, been a success in the eyes of the community by bringing additional income, increased visitors and visibility, increased attention from government and NGO agencies, and increased protection from storms. Additionally, the analysis revealed that on the whole interviewees perceived improvement in the condition of their ecosystems and felt that SMEP had engendered Silonians to be more conscientious about caring for their environment.

However, as mentioned in the discussion, these results should be considered in light of the close involvement Conservation International (CI) had throughout the data collection process. The fact that both interviewers were contract employees for CI and one was heavily involved with SNPS, as well as the fact that the focus groups were led by CI staff, could have skewed the interview data and resulting film. Their affiliation with CI may have caused interviewees and focus group participants to portray a more positive picture of the project than they actually think exists. Had the interviewers and focus group leaders been more neutral entities, interviewees and participants may have felt freer to discuss concerns and issues they have with SMEP.

Nevertheless, based on the results of the case study, I will make several suggestions in regards to SNPS, CI, and using CVM as an evaluation tool. First, in regards to SNPS, to address the

contending views expressed about SNPS membership, the organization should reevaluate its membership structure. Leaders in the organization should conduct a comprehensive survey of community attitude towards mandatory participation, perhaps by holding meetings on the topic or even conducting a door-to-door survey. Second, in order to address the undercurrent of resentment stemming from households that cannot afford the membership fee, SNPS should consider creating a fund in order to sponsor low-income households. Such a fund could also involve a more diverse cross-section of the community within SNPS. Third, stemming from the suggestions made by the community in the post-screening focus groups, SNPS should consider establishing a formal mangrove mentorship program in which they train neighboring barangays in restoration and climate adaptation strategies. This could both raise money for SNPS as well as multiply the benefits already reported by the interviewees of increased protection from typhoons and, according to some participants, improved fish stocks. As part of this program and per the suggestion of the focus group participants, “The Mangrove Keeper” could potentially be used to introduce the project to other barangays, including their youth in local schools.

In relation to CI, the results are useful in that they have demonstrated, with the aforementioned caveats, that Silonay has found value in SMEP. At the same time, the results have also revealed several pitfalls of working with a community-led organization focused on restoration and climate adaptation. These insights could help CI to better anticipate similar challenges when working with other community organizations in the future. Similarly, CI can also share the results and film with project partners to better understand which aspects should be retained and which should be restructured for future projects of a similar nature.

Finally, in regards to the Community Voice Method, the project has shown promise that CVM can be a useful qualitative evaluation tool. Though imperfect, the film and other data give CI systematic insights into where SMEP stands from the viewpoint of the community, which prior to this study they only knew anecdotally. However, despite this utility, I also noted that due to the small size of Silonay, little of what was expressed in the film seemed to be an entirely new insight. It seems that CVM could prove to be a more useful evaluation tool in larger communities that may not already be meeting regularly, as seemed to be the case in Silonay. The film and focus groups, though still useful as a self-reflexive tool within the context of Silonay and SMEP,

could prove more powerful in communities where less dialogue surrounding a project is already occurring prior to the evaluation. Lastly, many community members expressed that the film in a shorter, condensed version could be useful in sharing their story. Perhaps this could be added as another component or last stage to CVM—one in which the community gets to help shape the film into a form they find useful to further the project or topic that the film addresses.

It is of course important to emphasize that the results of this qualitative evaluation need to be triangulated with other quantitative socio-economic studies as well as ecological surveys to confirm the success of the project. Looking at factors such as whether or not there has been a quantifiable increase in income and biological resources is critical to fully understanding the status of SMEP.

More broadly, the results from this study provide additional evidence to the growing body of work demonstrating that when communities are given real power in the conservation process, they become more dedicated to it, making such projects more likely to be sustained (Ross & Wall, 1999). More specifically, the study adds to the knowledge of this occurring in fishing communities (Jentoft, 2000; Jentoft & McCay, 1995; Silver & Campbell, 2005). Another lesson from the project is that it was designed to provide multiple alternative options for income diversification rather than solely depending on ecotourism, for example, as a panacea to the problem of overfishing. This intersectoral model may be instructive for the future of coastal conservation highlighting the need to include multiple channels for alternative revenue.

However, it could also prove, in the long run, to weaken the overall project by splitting funds between too many smaller endeavors, preventing any of them from succeeding. To understand which outcome prevails, and keeping in mind that a community practicing certain conservation ethics today does not guarantee they will continue to do so in the future (Argawal & Gibson, 1999), it is imperative to conduct a follow-up study on the status of the project five or more years from now. Such a study would also reveal whether or not the community's current perceived success of SMEP has any longevity.

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## APPENDIX

### Appendix 1.0

#### INTERVIEW GUIDE (English & Tagalog)

##### *Community Voice Method as an evaluation tool for effectiveness of a holistic marine management plan*

1. Understand if the Community Voice Method, or some iteration of it, can be a useful qualitative tool to evaluate the effectiveness of the implementation of a holistic marine management plan that combines co-managed MPA's, cooperative fisheries and ecotourism, using Silonay as an ethnographic case study.
2. Determine if the community members of Silonay have perceived the climate adaptation measures, incorporated as part of the marine management plan, to be effective.

*\*Notes in parentheses are instructions for interviewer*

#### I) General

- What is your name?  
*Anong pangalan mo?*
- What do you do for a living?  
*Anong hanapbuhay mo?*
- How old are you?  
*Ilang taon ka na?*
- How many are in your household? *(Ask them to mention the members)*  
*Ilan ang nakatira sa inyong tahanan? Sino-sino ang mga ito?*
- Are you from Silonay, if not where are you from?  
*Ikaw ba ay naninirahan sa Silonay? Kung hindi, saan lugar ka nagmula/naninirahan?*
- What do you like/value about Silonay?  
*Para sa 'yo, ano ang gusto mo o pinapahalagahan mo sa Silonay?*
- Follow-up if don't mention the environment: What do you like/value about the environment here?

Kung hindi nabanggit ang kalikasan bilang sagot sa naunang katanungan: Ano ang gusto o pinapahalagahan mo sa kalikasan dito sa Silonay?

- Are there particular places that you love here?  
Meron bang partikular na lugar sa Silonay ang gustong-gusto mo?
- In general, what are your personal hopes and dreams?  
Sa pangkalahatan, ano-ano ang mga pangarap mo para sa sarili mo?
- What are your hopes and dreams for your family?  
Ano-ano naman ang mga pangarap mo para sa iyong pamilya?
- What do you wish for Silonay?  
Ano ang pangarap mo para sa Silonay?

*\*(Try to move interviewee along so they don't go on too long about these questions.)*

## II) MPA-related Questions

- Are you familiar with the Silonay Mangrove Conservation Area (*emphasize – pangangalaga ng bakawanan*)?  
Pamilyar ka ba sa Silonay Mangrove Conservation Area o sa pangangalaga ng bakawanan dito sa Silonay?
- If so, are you familiar with how it is managed?  
Alam mo ba kung paano ito pinapangasiwaan?  
Alam mo ba kung ano ang mga ginagawa para pangalagaan ang bakawanan dito sa Silonay?
- How do you feel about the Silonay Mangrove Conservation Area? Why?  
Anong ang tingin mo sa Silonay Mangrove Conservation Area o sa pangangalaga ng bakawanan dito sa Silonay? Bakit o paano mo nasabi ito?
- Have you participated in any protection, conservation or management of mangroves? If so, how have you been involved?  
Nakapagsagawa o nakasali ka na ba sa kahit anong gawain na patungkol sa pagpo-protekta, pangangalaga at pangangasiwa ng bakawanan? Kung oo, paano ka nakilahok?
- If you haven't been involved, what has kept you from participating?  
Kung hindi ka pa nakalahok sa mga ganitong gawain, ano o anu-ano ang mga naging dahilan para hindi ka makalahok?
- Would you like to participate in any of the protection, conservation or management activities?

Kung may pagkakataon, nais mo bang makilahok sa kahit anong gawain na patungkol sa pagpo-protekta, pangangalaga at pangangasiwa ng bakawanan?

- Do you know anyone else who has been involved with managing it?  
May kilala ka ba na indibidwal o grupo ng mga tao na nangangasiwa o kahit tumutulong sa pangangasiwa ng bakawanan sa Silonay?
- Overall, how would you say the community members feel about the Silonay Mangrove Conservation Area?  
Sa iyong palagay, ano ang pananaw ng mga tiga-Silonay tungkol sa Silonay Mangrove Conservation Area?
- Have you seen a change in mangrove condition since it has been in place?  
Mayroon ka bang napansin na pagbabago sa kondisyon ng mga bakawan simula nang magkaroon ng programa sa pangangalaga ng bakawanan sa Silonay?
- What changes have you seen since you started managing the mangroves as a mangrove MPA? (i.e. have you seen a change in the number of fish, birds, shells, mangrove propagules, more people visiting, etc?)  
Anu-ano ang mga pagbabagong iyong napansin simula nang magkaroon ng programa sa pangangalaga ng bakawanan sa Silonay? (Napansin mo ba kung may pagbabago sa dami ng isdang nahuhuli? Marami ka din bang napapansin na mga ibon sa paligid? Marami na din bang *mangrove propagule* na nakukuha? Marami na bang mga tao ang bumibisita sa Silonay?)
- Has it changed your household income? If so how?  
Nabago ba nito ang kita o pangkabuhayan ng inyong pamilya? Kung oo, sa paanong paraan?
- Have you seen any other benefits from the mangrove?  
Para sa 'yo, ano pa ang ibang pakinabang o benepisyo mula sa mga bakawan?
- Do you have any ideas for improving the management of the mangrove MPA?  
Mayroon ka bang ibang mungkahi para mas lalong mapabuti ang pangangasiwa sa pangangalaga ng bakawanan sa Silonay?

### III) Fisheries-related Questions

- Are you involved in any fisheries-related activities?  
Ikaw ba ay nagsasagawa ng mga gawain na patungkol sa pangingisda?
- If so, in what ways? (For example, fishing, fish processing, fish vending, fixing nets or fishing gear, etc)  
Kung oo, sa paanong paraan? (Ikaw ba ay nangingisda mismo? Nagpoproseso ng mga huling isda? Nagbebenta ng isda? Gumagawa o kumukumpuni ng lambat o ibang gamit sa pangingisda?)

- Do you fish for home consumption or for selling or both?  
Ikaw ba ay nangingisda para pangkain lamang ng iyong pamilya or para ibenta lamang or pareho?
- Has the fishing been better or worse in the last 3 years?  
Sa nakalipas na tatlong taon, naging maganda ba o hindi ang kalagayan ng pangigisda sa inyong lugar?
- If you sell your fish catch, do you feel like you get paid fairly for your catch?  
Kung ikaw ay nagbebenta ng iyong mga huling isda, sa tingin mo ba, ikaw ay nababayaran sa tamang halaga?
- Do you earn enough from fishing to support your family?  
Sapat ba ang iyong kinikita mula sa pangigingisda upang tustusan ang iyong pamilya?
- Do you know if the fishery is managed?  
Alam mo ba kung pinapangasiwaan ang pangisdaan sa inyong lugar?
- Do you know who manages the fishery?  
Alam mo ba kung sino o sinu-sino ang nangangasiwa sa pangisdaan sa inyong lugar?
- Do you know how the fishery is managed?  
Alam mo ba kung paano pinapangasiwaan ang pangisdaan sa inyong lugar?
- Have you participated in any voluntary activities in managing the fisheries such as patrolling, coastal clean-up, setting up marker buoys, etc?  
Nakalahok ka na ba sa kahit anong gawain na patungkol sa pangangasiwa at pangangalaga ng pangisdaan, kagaya nang pagpapatrolya, paglilinis sa tabing dagat, paglalagay ng buya, atbp.?
- Are you provided enough relevant information for fisheries?  
Binibigyan ba kayo ng sapat na impormasyon patungkol sa pangisdaan?
- What type of information is provided?  
Anu-anong klaseng impormasyon ang binabahgi sa inyo?
- Who provides you with this information?  
Sino ang nagbibigay ng mga impormasyon patungkol sa mga ganitong bagay?
- Do you have any ideas for how the fishery could be managed more effectively? (i.e. strategies or recommendations for increasing fish catch, productivity, protecting the habitats of the fisheries)  
Mayroon ka bang ideya o suhestyon upang lalong mapangalagaan at mapangasiwaan ang pangisdaan? (Halimbawa, paraan para mapataas ang huli ng isda, para lalong dumami ang isda, o para mapangalagaan ang tirahan ng mga isda?)

- Are you familiar with any fisheries related laws and regulations (i.e. Fisheries Code of 1998, municipal ordinances, environmental policies, etc.)  
*Pamilyar ka ba sa kahit anong batas o regulasyon patungkol sa pangisdaan? (Halimbawa, Fisheries Code of 1998, mga ordinansa ng siudad/munisipyo, polisiya patungkol sa kalikasan, atbp.)*
- What are your opinions about the fisheries related laws and regulations?  
*Ano ang pananaw mo sa mga batas o regulasyon patungkol sa pangisdaan?*

#### IV) Ecotourism-related Questions

- Are you involved with ecotourism in Silonay? If so, how?  
*Nakikilahok ka ba sa mga gawaing patungkol sa ecotourism sa Silonay? Kung oo, sa paanong paraan?*
- If not, would you like to be involved with ecotourism?  
*Kung hindi, nais mo bang makilahok sa mga gawaing patungkol sa ecotourism?*
- If so, how would you like to be involved?  
*Kung oo, sa paanong paraan nais mong makilahok?*
- Do you feel your community or organization has the resources and knowledge to start its own ecotourism project?  
*Sa tingin mo ba, may kakayanan (pagdating sa pondo at kaalaman) ang inyong komunidad o organisasyon upang magsagawa ng sarili n'yong proyekto sa ecotourism?*
- How do you feel about sharing Silonay with visitors if they are contributing money to the local economy?  
*Ano ang iyong pananaw sa pagbubukas ng Silonay sa mga panauhin, lalo na kung sila ay nakakatulong sa ekonomiya ng inyong barangay sa pamamagitan ng pagbabayad ng pera sa pagbisita sa inyong lugar?*
- How do you think ecotourism has impacted your household?  
*Sa iyong pananaw, paano naapektuhan ng ecotourism ang iyong tahanan o pamilya?*
- How do you think ecotourism has impacted your community?  
*Sa iyong pananaw, paano naapektuhan ng ecotourism ang inyong komunidad sa Silonay?*
- How do you think ecotourism has impacted your city?  
*Sa iyong pananaw, paano naapektuhan ng ecotourism ang inyong lungsod?*
- How do you think ecotourism has impacted your province?  
*Sa iyong pananaw, paano naapektuhan ng ecotourism ang inyong probinsya?*

- Would you like to see more or less ecotourism in Silonay?  
Nais mo pa bang makakita o magkaroon ng marami pang gawain patungkol sa ecotourism sa Silonay? O nais mo bang mabawasan ang mga ito?
- What type of activities do you think potential visitors would enjoy?  
Sa tingin mo, anong klaseng mga gawain o aktibidades ang magugustuhan at magpapasaya sa mga posibleng panauhin ng inyong lugar?
- How would you feel about having joint partnership with other nature based tourism sites in the city or the province, for example Harka Piloto?  
Ano ang iyong pananaw sa pagkakaroon ng magkasanib na programa ng Silonay Mangrove Conservation Area at ng ibang lugar sa lungsod o probinsya na kagaya nito, tulad ng Harka Piloto?
- Would you like to suggest any sites, and if so which ones?  
Nais mo bang magmungkahi ng mga lugar na maaaring makipagsanib ang Silonay Mangrove Conservation Area? Kung oo, saan o alin ang mga lugar na ito?

#### V) Climate Adaptation-related Questions

- Are you familiar with climate change? (*If yes, then go to #2, if not, show video*)  
Pamilyar ka ba sa Climate Change? (Kung oo, magpatuloy sa susunod na tanong)  
(*Skip questions #2-3 if showed video*)  
Kung hindi, ipakita na lamang ang video tungkol sa climate change at wag nang itanong ang #2 at 3
- #2 If you are familiar with climate change, what does it mean to you?  
Kung pamilyar ka sa climate change, ano ang ibigsabihin nito para sa iyo?
- #3 How did you first learn about climate change?  
Paano mo unang nalaman ang konsepto ng climate change?
- Have you been provided with enough relevant information on climate change?  
Binibigyan ba kayo ng sapat na impormasyon patungkol sa climate change?
- What can you say about climate change? (How you feel, your opinion)  
Sa iyong sariling pananaw, ano ang masasabi o nararamdaman mo tungkol sa climate change? Anong masasabi mo tungkol dito?
- Do you think you've been affected by climate change?  
Sa tingin mo ba, naapektuhan ka ng climate change?
- If so, how has climate change affected you? (*Try to get them to elaborate on a number of responses*)  
Kung oo, sa paanong paraan kayo naapektuhan o naapektuhan ng climate change?  
(Subukan makakuha ng marami at malawig na sagot)

- Which one change has most affected your life or livelihood?  
Anong isang pagbabago na dulot ng climate change ang may pinaka-epekto sa iyong buhay o pangkabuhayan?
- Have you undertaken activities on your own to remedy the situation?  
Ikaw ba mismo ay nagsagawa ng mga personal na aktibidades upang lunasan ang mga situwasyong sanhi ng climate change?
- Have you participated in any projects that have tried to remedy the situation?  
Nakalahok ka na ba sa kahit anong gawain o proyekto upang lunasan ang mga situwasyong sanhi ng climate change?
- If so, which projects have you participated in?  
Kung oo, anong mga proyekto ang nalahukan mo na?
- If not, have you heard about any of these types of projects?  
Kung hindi naman, nakarinig ka nab a o may alam ka bang mga proyekto upang maibsan ang mga situwasyong sanhi ng climate change?
- What effect do you think climate projects, like restoring the mangroves, has had on the community?  
Ano sa tingin mo ang epekto sa inyong komunidad ng mga gawain o proyekto patungkol sa kalikasan at klima, kagaya na lamang ng pagtatanim at pangangalaga ng mga bakawan?
- Would you like to see more or less projects like this in your community?  
Nais mo pa bang magkaroon ng marami pang gawain patungkol sa climate change sa Silonay? O nais mo bang mabawasan ang mga ito?
- Do you think these projects have changed the overall wellbeing of the community and ecosystems?  
Sa tingin mo ba, ang mga proyektong ito ay nabago ang pangkabuuang kapakanan ng inyong komunidad at ng inyong *ecosystem*?
- Do you think these projects have improved the conditions of the ecosystems (corals, mangroves)?  
Sa tingin mo ba, ang mga proyektong ito ay napabuti ang kalagayan ng inyong mga *ecosystems*, kagaya ng mga bakawanan at bahura?
- Do you think these projects have improved the overall wellbeing of the community?  
Sa tingin mo ba, ang mga proyektong ito ay napabuti ang pangkabuuang kapakanan ng inyong komunidad?



- Do you think these projects will change the overall well-being of the community in the future, once they have matured?  
Sa tingin mo ba, kapag hinog na o tapos na ang mga proyektong isinasagawa, ang mga proyektong ito ay lalong mapapabuti ang pangkabuuang kapakanan ng inyong komunidad?
- Do you have any ideas for projects related to climate adaptation that you would like to see happen in the community?  
Mayroon ka bang ibang alam na mga proyekto patungkol sa pagtugon sa climate change na nais mong makitang maisakatuparan o maisagawa sa inyong komunidad?
- Are there any results that you've seen from your work that you think have addressed climate change?  
Mayroon ka bang nakitang magandang bunga mula sa mga ginawa mong aktibidades, ang sa tingin mo ay nakatulong o makakatulong tugunan ang climate change?
- What other results would convince you that your individual interventions/activities have been effective in addressing climate change? (i.e. early warning system, sandbagging, etc)  
Ano pang ibang resulta ang sa tingin mo ay makakapagpatunay na ang mga ginawa mong personal na aktibidades ay mabisang tugon sa climate change? (Halimbawa na lamang ay pagkakaroon ng early warning system, pagsasagaw ng sandbagging, atbp.)
- Do you think the mangrove restoration work has been effective? If so, how?  
Sa tingin mo ba, ang isinagawang pagtatanim at pangagalaga sa mga bakawanan ay mabisang paraan sa pagtugon sa climate change? Kung oo, sa paanong paraan?

#### VI) Wrap-up Questions

- Is there anything I haven't asked about that you would like to say?  
Mayroon ka pa bang nais sabihin o ibahagi bukod sa mga naitanong kanina?
- Who else should we interview?  
Sino pa ang maaari naming matanong?

\* As a follow up to this question, may want to ask them to ID people in underrepresented subpopulations whom you could interview (if they didn't ID such people on their own). For example, if I need more female interviewees, prompt my interviewee to think whether there are any women I should interview, if he/she hasn't spontaneously done so.

THANK YOU!!!!

## Appendix 2.0

### FOCUS GROUP GUIDE

**Instructions for focus group leaders: Let the group lead the discussion where they wish, these are just conversation starters in case people are hesitant to speak.**

- 1) Thinking about the content of the film (i.e. mangrove restoration, fisheries, ecotourism, climate change):
  - a. Did you find any of the viewpoints presented on the topics interesting or compelling?
  - b. Did you agree or disagree with any of the views presented? Why?
  - c. Would you like to see any of the suggestions made in the film implemented in Silonay? If so, which ones? If not, why not?
  - d. Do you have any additional suggestions not mentioned in the film?
- 2) Do you feel confident that when the funding from CI ends, the project will continue to be successful? Why or why not? How do you see it continuing?
- 3) Can you think of other ways the results from the film can be useful or any other uses for the film?

## Appendix 3.0

### SILONAY COMMUNITY VOICE WRAP-UP SURVEY (English & Tagalog)

1) Do you think the movie represented Silonay in a balanced and accurate way?

*Sa inyong palagay, naging balanse at wasto ba ang naging pagpapakilala sa Silonay sa pelikula? Paki-bilugan ang inyong sagot ayon sa inyong palagay.*

No	A little	Not sure	Somewhat	Yes
<i>Hindi</i>	<i>Kaunti lamang</i>	<i>Hindi sigurado</i>	<i>Kahit papaano</i>	<i>Oo</i>

2) Do you feel participating in this process was productive? Circle the option that reflects how you feel.

*Sa inyong palagay, naging produktibo ba ang pakikilahok ninyo sa prosesong ito? Paki-bilugan ang inyong sagot ayon sa inyong palagay.*

No	A little	Not sure	Somewhat	Yes
<i>Hindi</i>	<i>Kaunti lamang</i>	<i>Hindi sigurado</i>	<i>Kahit papaano</i>	<i>Oo</i>

3) Are you at all confident that this film and process will lead to further developments in Silonay?

*Ikaw ba ay panatag at may tiwala na sa tulong ng pelikulang ito at ang prosesong ginamit ay magdudulot ng patuluyang pag-unlad ng Silonay?*

No	A little	Not sure	Somewhat	Yes
<i>Hindi</i>	<i>Kaunti lamang</i>	<i>Hindi sigurado</i>	<i>Kahit papaano</i>	<i>Oo</i>

4) Please provide any suggestions for improving the process in the space below:

*Mangyaring magbigay ng anumang mga mungkahi para sa pagpapabuti ng proseso sa puwang sa ibaba:*

5) Finally, please add any additional comments below:

*Panghuli, mangyaring magdagdag ng anumang karagdagang mga komento sa ibaba:*